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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/529,589	03/29/2005	Philip Edward Haskell	05-217	9023

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EXAMINER

CUMMING, WILLIAM D

ART UNIT	PAPER NUMBER
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2617

DATE MAILED: 05/09/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No. 10/529,589	Applicant(s) HASKELL ET AL.	
	Examiner WILLIAM D. CUMMING	Art Unit 2617	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☒ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1,4-8,12,13 and 15-17 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1,4-8,12,13 and 15-17 is/are allowed.
- 6) ☐ Claim(s) \_\_\_\_ is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date ____. | 6) <input type="checkbox"/> Other: ____.  |

***Priority***

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

***Specification***

2. Applicant is reminded of the proper language and format for an abstract of the disclosure.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "*The disclosure concerns,*" "*The disclosure defined by this invention,*" "*The disclosure describes,*" etc.

3. The abstract of the disclosure is objected to because of the implied phrases. Correction is required. See MPEP § 608.01(b).

***Claim Objections***

4. Claim 12 is objected to because of the following informalities:

In claim 12, "*the base station*" lacks antecedent basis

Appropriate correction is required.

***Allowable Subject Matter***

5. Claims 1, 4-8, 12-13, 15-17 are allowed.

6. The following is a statement of reasons for the indication of allowable subject matter:

The prior art of record does not disclose or make obvious the claimed base station for communicating signals between an operator and one or more mobile units by means of an antenna system having a plurality of radiating elements. The system is arranged to process the signals as a plurality of component signals, each component signal being associated with one or more radiating elements within the antenna system, and modulating means are arranged to apply complex weights to the component signals such that summation of the component signals results in the production of an antenna beam direction dependent on the value of the complex weights, and wherein splitting, combining, and component signal amplifying means is provided between the application of the complex weight to the component signal and the component signal passing through its associated radiating element or elements. The splitting and combining means incorporates an interface allowing other operators to be connected simultaneously to the same antenna system, with each operator operating on a different frequency, and the system further includes a measurement receiver, and a data hub. The measurement receiver is adapted to take a complex measurement from any component signals in the vicinity of the antenna system and generated by any basestation connected to the antenna system, and to pass the measurement to the generating basestation via the data hub, to

enable phase component signal phase correction due to changes in feeder length between the basestation and the antenna.

### ***Conclusion***

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

**Golding, et al** disclose a system for tracking mobile tags. Cell controllers with multiple antenna modules generate a carrier signal which is received by the tags. Tags shift the frequency of the carrier signal, modulate an identification code onto it, and transmit the resulting tag signal at randomized intervals. The antennas receive and process the response, and determine the presence of the tags by proximity and triangulation. The recursive-least squares (RLS) technique is used in filtering received signals. Distance of a tag from an antenna is calculated by measuring the round trip signal time. The cell controllers send data from the antenna to a host computer. The host computer collects the data and resolves them into positional estimates. A combined infrastructure including a wireless communication system and the local positioning system.

8. This application is in condition for allowance except for the above formal matters.

9. Prosecution on the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

10. A shortened statutory period for reply to this action is set to expire **TWO MONTHS** from the mailing date of this letter.

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to **WILLIAM D. CUMMING** whose telephone number is 571-272-7861. The examiner can normally be reached on Monday-Thursday, 11:00am-8:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Marsha Banks-Harold can be reached on 571-272-7925. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

12. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
WILLIAM D. CUMMING  
Primary Examiner  
Art Unit 2617

Wdc



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